CalESCO CALIFORNIA EARTH SCIENCE CORPORATION

1318 SECOND STREET, SUITE 27 · SANTA MONICA, CALIFORNIA 90401 TELEPHONE 395-4528, AREA CODE 213

November 5, 1973

CONTRACT NAS 2-7698
MONTHLY PROGRESS REPORT NO. 5
OCTOBER 1973

Fault Tectonics and Earthquake Hazards in the Peninsular Ranges, Southern California, EREP Investigation 463

NASA, Ames Research Center
Mail Code 241-1
Moffett Field, CA 94035

Attention: Mr. Gabriel Fox
Contracting Officer

Gentlemen:

California Earth Science Corporation (CalESCO) is pleased to submit its 5th Monthly Progress Report on the application of Skylab imagery to analysis of fault tectonics and earthquake hazards in the Peninsular Ranges, southern California under NASA contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to continue analysis of images from SL1/SL2. The milestone plan provides a time-oriented schedule of the entire effort to be performed.

Significant Progress

1. 9 x 9 inch color, color IR, b & w positive and negative transparancies of SL1/SL2 imagery were received during October.
2. All calibrations have been completed of the black-and-white film to be used for intermediate separations.
3. 8 x 10 transparencies for subtraction evaluation of Skylab images 114-06A and 114-10A have been produced.
4. Intermediate separations for the Skylab 114-06A pseudocolor transformation have been created.
5. Preliminary investigation into the kinds of digital filters which apply to extracting lineaments has been completed.

6. Field investigations were conducted 12-14 Oct and 29-31 Oct to collect ground truth data. Efforts were concentrated on the San Andreas, Blue Cut, Coyote Creek, and San Felipe faults.

Expected Accomplishments, Current Month

1. Analysis of SL1/SL2 imagery will be continued.
2. The pseudocolor transformation of the Salton Sea image will be created.
3. The pseudocolor transformation of the separation image will be created.
4. Supporting studies will be continued.

Travel Summary and Plans

Dr. Merifield visited NASA/Ames for the purpose of selecting pertinent U-2 photos of the test site and conferred with John Tremor and Angelo Margozzi. On the same trip, geologists with the U.S. Geological Survey, Menlo Park, who are currently engaged in the project to map active faults in southern California were visited.

Field checks of faults imaged by SL1/SL2 will continue during November. It is planned to prepare technical reports which describe the results of our investigation of individual faults.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORP.

Paul M. Merifield

Paul M. Merifield, Ph.D.
Principal Investigator

cc: National Aeronautics and Space Administration
Scientific and Technical Information Facility
Code KS
Washington D.C. 20546

Mr. John W. Tremor
NASA, Ames Research Center
Moffett Field, CA 94035

NASA Manned Spacecraft Center
Attn: Martin Miller, Mail Code TF6
Houston, TX 77058

NASA Manned Spacecraft Center
Earth Observations Division
Attn: V. M. Dauphin, Mail Code TF
Houston, TX 77058